Pre-Test Classifications of Matter

Bookmark this page

In the following questions, where appropriate, input your answer as a numerical value. If you wish to use scientific notation, please use the following format. The number 1.8×10^{25} should be written "1.8e25" or as "1.8*10^25"

Pure Substances and Mixtures

2/2 points (ungraded)
For the following types of substances, select the appropriate chemical using the dropdown menu.

a) Give an example of a compound.

laughing gas (nitrous oxide) ✔

b) Give an example of a homogeneous mixture.

regular unleaded gasoline ✔

Submit Grading method: Last Score

Physical vs. Chemical Changes

2/2 points (ungraded)
a) Is glass shattering a physical or chemical change?

- (●) physical change
- ( ) chemical change

✔

b) Is a copper statue turning green a physical or chemical change?

- ( ) physical change
- (●) chemical change

✔

Submit Grading method: Last Score

Moles and Molar Mass

0.5/1 point (ungraded)
Avogadro's number: $\mathbf{N_A} = 6.02214 \times 10^{23}$.

Element	Average Atomic Mass
sulfur, $\mathbf{S}$	$32.0650\ \frac{\mathbf{g}}{\mathbf{mol}}$
potassium, $\mathbf{K}$	$39.0983\ \frac{\mathbf{g}}{\mathbf{mol}}$

How many moles are in 71.7 grams of potassium sulfide, $\mathbf{K_2S}$?

0.6502717174 $\mathbf{mol}$ ✱

$\mathbf{0.6502717174}$
Your value is correct, but your answer does not have the correct number of significant digits.

© All Rights Reserved

About Us
Terms of Service

POWERED BY
Calculator

Submit Grading method: Last Score

Accessibility

Help

© 2026 Massachusetts Institute of Technology

edX and Open edX are registered trademarks of edX LLC.

The Laws of Definite and Multiple Proportions

1.0/1 point (ungraded)

Calculate the percent by mass of hydrogen in acetic acid, $(\mathbf{C_2H_4O_2})$, using the molar masses given below. Express the answer to four significant figures.

The molar mass of acetic acid is $\mathbf{60.05}\ \frac{\mathbf{g}}{\mathbf{mol}}$.

The molar mass of hydrogen, $\mathbf{1.0079}\ \frac{\mathbf{g}}{\mathbf{mol}}$.

6.714 % ✔

$\mathbf{6.714}$

Correct.

Submit Grading method: Last Score

If after taking this Pre-Test you feel that you need to study this material, please complete the sub-module entitled "Classifications of Matter."

Previous Next

Calculator

Calculator